

CLAIMS

What is claimed is:

1. Conducting and Magnetizing Double Spiral Capacitor-inductor, comprising:

a conducting and magnetizing double spiral made by spooling an insulated and at same time conducting and magnetizing double thin band, it is two similar or not similar bands, into a double spiral disk or roll;

an electric current, mostly alternating current but in some possible applications direct current or both being led to the two said bands of said double spiral via two insulated electrodes, so that one electrode lies at the center end of one said band, and the other electrode at the rim end of the other said band, the center electrode also being able to lie at the outer band, in which case the rim electrode must be lying at the inner band;

the said spiral disk or roll having or not an insulated casing, depending on an application of the said invention;

the flat and curved sides of the said double spiral disk or roll having an insulation to prevent short-cuts between the band loops or between them and other conducting objects;

an alternating current from an electric source being connected on said two electrodes, always circulating in the same direction in the said both bands;

the said double spiral band functioning at the same time both as a capacitor and an inductor.

2. A Conducting and Magnetizing Double Spiral Capacitor-inductor, according to claim 1 having:

the free ends of the said bands being totally insulated from each others when allowed only alternating current to circulate in the said bands and flowing through the said double band;

the said bands having a galvanic connection with a resistive load between the otherwise free ends of the said bands when needed a direct current to circulate in the said bands to create an unalterable magnetic field as a proper spiral magnet, or using both alternating and direct current together in the said invention when needed to;

an alternating current, when exciting the said invention, generating an alternating electromagnetic field in the said double spiral and around it, the magnetic field protruding from the said double spiral disk or roll perpendicularly to its flat sides, but the electric field existing perpendicularly between every two band loop, regardless of if the band loops belong to the same or different said

double spiral loops, getting always alternate potential +, -, +, -, ... or -, +, -, +, ... compared with each others;

the capacitive and inductive reactance's being equal in the said invention with due dimensions eliminating each others and allowing only resistance to be left, needing no extra component to balance an impedance of the said invention and having no reactive power.

the said two bands including three layers that are: a conducting layer of a good conductor substance, a magnetizing layer that also conducts, and an insulating layer being, when desired, magnetizing at same time as some magnetizing and insulating ferro-oxides, to increase the permeability of the said double spiral disk, or the said two spiral bands or one of them including only a magnetizing and at the same time conducting layer and an insulating layer that magnetizes, too, if wanted to;

3. A Conducting and Magnetizing Double Spiral Capacitor-inductor, according to claim 2 used:

as substitutes for alternating current motor coils at the stator and rotor;

4. A Conducting and Magnetizing Double Spiral Capacitor-inductor, according to claim 2 used:

as an adjustable double spiral capacitor-inductor with an immovable spiral band fixed inside its immovable casing, installed in its place, and a movable spiral band fixed inside its movable casing that can be moved back and forth with an adjusting knob to change both capacitance and inductance of the said double spiral;

the said knob being fixed at the outer end of a screw-stick, which in its turn being put through a bearing into a tube-case being fixed perpendicularly in the inside center of the said immovable casing having a screw thread inside it;

the said spiral bands being fixed at the bottoms of their said casings with a substance strong and insulative enough;

between the said casings at their rims being longitudinal straight furrows fitting interlocked to each others to keep the said movable casing from rotating;

the said insulation of the said two bands having to endure chafing when adjusting, or the said bands having to be separated from each others by a sufficient air gap to prevent chafing and shortcuts.

5. A Conducting and Magnetizing Double Spiral Capacitor-inductor, according to claim 2 used:

as a capacitor-inductor microphone-speaker with an immovable spiral band fixed inside its immovable casing, installed in its place, and a movable spiral band fixed inside its movable casing, the movable casing with its expansion plate rim being suspended with radial springs between the said rim and the said immovable casing;

the said spiral bands being fixed at the bottoms of their said casings with a substance strong and insulative enough;

the said movable casing with its spiral band vibrating when sending or receiving sound waves;

the said bands always being separated from each others by a sufficient air gap between them to prevent chafing and shortcuts;

the device functioning as a microphone, the entering sound waves making the said movable casing with its said spiral band to vibrate generating an alternating electric current in the fixed band needing a pre-magnetization with a direct current or by making the magnetizing layer of the band permanently magnetized;

the said generated alternating current being amplified for its purpose;

and when the said microphone-speaker functioning as a speaker, the amplified alternating current imitating the sound to be transmitted being circulating in the said fixed band generating a corresponding magnetic field making the said vibrating band and its said casing to transmit the purported sound, using pre-magnetization for the said fixed band when needed.

6. A Conducting and Magnetizing Double Spiral Capacitor-inductor, according to claim 2 applied:

to an electromagnetic pulse generator, with its casing, being installed under a road surface, or temporarily placed on the road with its driving slopes, to stop speeding vehicles;

an alternating current being led with leads from a public network or an other strong electric source via two electrodes to the said double band;

the lid of the said casing being of dielectric substance to let the electromagnetic radiation through, but the bottom and the cylinder part of the casing being of conducting or both conducting and magnetizing material to align the radiation into the purported direction and prevent it from dispersing;

the said generator emitting a strong electromagnetic pulse to ruin the electronic circuits of the said vehicle and stop it;

the said generator being triggered manually, electrically, magnetically, or electromagnetically;

for lifting and moving the said generator being used a lifting tube fitted perpendicularly in the center of the bottom of the casing with a screw thread inside it as well as a lifting hook screwed into the lifting tube when lifting.

7. A Conducting and Magnetizing Double Spiral Capacitor-inductor, according to claim 2 applied:

as installed or plugged into the public electric source in numbers, in all three phases when needed, to function as buffer components;

the said invention with usable dimensions being able to transmit enough alternating current power for devices needing it but stopping any direct current;

the said invention being also able to smooth voltage and current pulses going through the electric net, during a thunder storm or other disturbances;

with large dimensions and plurality the said invention being able to prevent large electric nets from collapsing, when an electric disturbance happens during high consumption, by giving the safety system a critical time to react without panic.

8. A Conducting and Magnetizing Double Spiral Capacitor-inductor, according to claim 2 used:

as a band-pass or -reject filter depending on its circuit diagram and the dimensions of the said filter.

9. A Conducting and Magnetizing Double Spiral Capacitor-inductor, according to claim 2 used:

as an electromagnetic emitter transmitting electromagnetic waves of a wavelength depending on the dimensions of the said emitter;

the said emitter having an insulated metal casing, magnetizing or not, open on one of the flat sides of the said emitter in the transmitting direction;

the said emitter being used as a beamed transmitting antenna.